

Takahashi SHIRAHATA, Application No. 10/566,666
Page 10

Dkt. 1141/75776

REMARKS

Claims 1-20 are pending. By this Amendment, claims 1 and 11 have been amended to clarify the claimed subject matter. Claims 1-20 remain pending upon entry of this Amendment, with claims 1 and 11 being in independent form.

Informalities

By this Amendment, the application has been amended to address the formal issues referenced in the Office Action, as well as otherwise.

Cited Art

Claims 1, 3, 6, 11, 13 and 16 were rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Oosawa (US 7,616,789) in view of Ando et al. (JP 2002-207992). Claims 2, 4, 5, 7, 9, 12, 14, 15, 17 and 19 were rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over newly cited Oosawa in view of Ando and further in view of Greenberg (US 6,301,498). Claims 8 and 18 were rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over newly cited Oosawa in view of Ando and further in view of Heibrun et al. (US 2001/0039421 A1). Claims 10 and 20 were rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over newly cited Oosawa in view of Ando and Greenberg and further in view of Knoplioch et al. (US 6,643,533).

Oosawa, as already discussed in the record and as acknowledged in the Office Action, does not disclose or suggest comparing a deformation set of geometric parameters related to deformation from normal shapes and a reference set of geometric parameters related to normal shapes of one or more organ regions, much less the aspects of the present application of providing at least *visual information that includes a chart showing changes of geometric parameters as between the deformation set of geometric parameters of a deformed organ and*

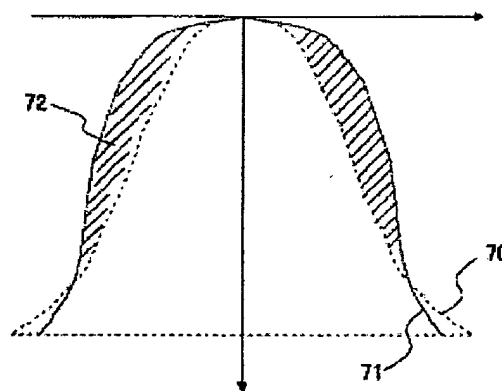
Takahashi SHIRAHATA, Application No. 10/566,666
Page 11

Dkt. 1141/75776

the reference set of geometric parameters, informing the existence of lesion.

The aforementioned aspects of the present application are illustrated by way of example in Fig. 7 (reproduced below) of the present application, wherein cross-sectional image position of the spacing distance of bronchi is illustrated using bronchi spacing distance data. In such example using bronchi spacing distance data, curve 71 formed based on data collected from a patient is illustrated along with reference curve 70, and, as discussed in paragraph [0128] (of US 2006/0280347 A1), the criteria applied may be that if the curve 71 is outside of the reference curve 70 it is judged as a lesion candidate, and if inside of the reference curve it is judged as normal. In practice, area ratio r as between the area framed by curve 71 indicating the obtained bronchi spacing distance and area 72 being protruded to the outside of area 70 may be compared to a threshold T , and when the calculated area ratio r is more than the threshold T , it is determined that the form is abnormal, and when less than threshold it is determined as normal.

FIG. 7



Ando (JP 2002-207992) does not cure the deficiencies of Oosawa. Ando, as understood by applicant, merely proposes an approach for extracting an area of interest from an input image, including extracting an outline of the area of interest from the input image, performing fit

Takahashi SHIRAHATA, Application No. 10/566,666
Page 12

Dkt. 1141/75776

processing between the outlined image portion and shape data corresponding to the area of interest, read from a database that stores data defining the standard shape of the area of interest.

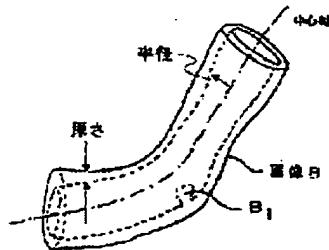
The shape data of Ando is apparently equated in the Office Action to reference data.

However, such "reference data" is merely proposed in Ando for use in fit processing, that is, to reconcile an extracted outline with a reference shape, in order to resolve an area of interest.

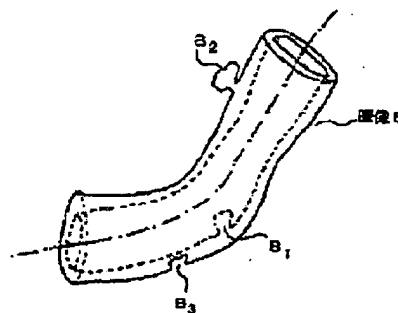
However, Ando, like the other cited references (including Greenberg, Heibrun and Knoplioch), says nothing whatsoever regarding providing at least *visual information that includes a chart showing changes of geometric parameters as between the deformation set of geometric parameters of a deformed organ and the reference set of geometric parameters*, informing the existence of lesion.

Instead, the display that is provided in Ando is merely a processed image of the area of interest (drawing 9 of Ando, which is processed based on drawings 3 and 6).

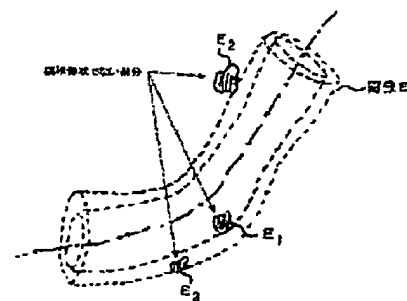
【図3】



【図6】



【図9】



Applicant submits that the cited art, even when considered along with common sense and common knowledge to one skilled in the art, does **NOT** render unpatentable the aforementioned aspects of the present application of providing visual information that includes a chart showing changes of geometric parameters as between the deformation set of geometric parameters of a

Takahashi SHIRAHATA, Application No. 10/566,666
Page 13

Dkt. 1141/75776

deformed organ and the reference set of geometric parameters, informing the existence of lesion.

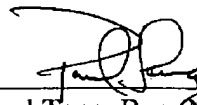
The cited art simply does NOT recognize the usefulness of a chart showing changes of geometric parameters as between the deformation set of geometric parameters of a deformed organ and the reference set of geometric parameters, for informing the existence of lesion.

In view of the remarks hereinabove, applicant submits that the application is now allowable, and earnestly solicits the allowance of the application.

However, if the Examiner can suggest an amendment that would advance this application to condition for allowance, the Examiner is respectfully requested to call the undersigned attorney.

If a petition for an extension of time is required to make this response timely, this paper should be considered to be such a petition. The Patent Office is hereby authorized to charge any required fees in connection with this amendment, and to credit any overpayment, to our Deposit Account No. 03-3125.

Respectfully submitted,



Paul Teng, Reg. No. 40,837
Attorney for Applicant
COOPER & DUNHAM LLP
30 Rockefeller Plaza, 20th Floor
New York, New York 10112
Tel.: (212) 278-0400